



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,175	08/02/2000	Scott L. Vance	4015-668	8647
24112	7590	05/04/2005	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			NGUYEN, LUONG TRUNG	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/631,175

Applicant(s)

VANCE ET AL.

Examiner

LUONG T. NGUYEN

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 4/30/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-32 is/are allowed.
- 6) ☒ Claim(s) 1,9,10,12-16,24,25,27,28,33,34 and 38-40 is/are rejected.
- 7) ☐ Claim(s) 2-8,11,17-23,26,35-37,41-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-37 and newly added claims 38-42 filed on 4/30/2004 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 9-10, 12-16, 24-25, 27-28, 33-34, 38-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Robb (U. S. Patent No. 6,177,950).

Regarding claim 1, Robb discloses a combination mobile terminal and camera (Multiplephone 20, Figure 1, Column 5, Lines 24-65) comprising a housing (Multiplephone 20 has a housing, which includes clip-on enclosure 99, Figures 1A-1B, 6, Column 5, Lines 24-65, Column 10, Lines 33-58) having a first light aperture formed in a first side of said housing (aperture for attaching lens 93, Figure 6, Column 10, Lines 49-58) and a second light aperture formed in a second side of said housing (aperture for attaching lens 95, Figure 6, Column 10, Lines 49-65); a wireless transceiver disposed within said housing for transmitting and receiving signals (aerial 1, Figure 1, Column 5, Lines 35-40); an image sensor disposed within said

Art Unit: 2612

housing for converting images formed by light on said image sensor into electrical signals (inherently included in camera 2, Figure 6, Column 10, Lines 33-40); an optical system for selectively directing light passing through said first and second light apertures onto said image sensor (combination of lens 93, 95, camera 2 inherently included a focusing lens, camera shroud 92, light sources 97, Figure 6, Column 10, Lines 33-58); and an image processor coupled to an output of said image sensor for processing the electrical signals from said image sensor to produce image signals (processor 41, Figure 3, Column 7, Lines 34-39).

Regarding claim 9, Robb discloses said optical system comprises at least one lens (focusing lens inherently included in camera 2, Figure 6).

Regarding claim 10, Robb discloses the lens is movable between a first position along a first image path (camera 2 inherently included a focusing lens rotates to the direction of lens 93, Figure 6, Column 10, Lines 35-40) to a second position along a second image path (camera 2 inherently included a focusing lens rotates to the direction of lens 95, Figure 6, Column 10, Lines 35-40).

Regarding claim 12, Robb discloses a first lens (lens 93) disposed along said first image path (the path where camera rotates to the direction of lens 93, Figure 6) and a second lens (lens 95) disposed along said second path (the path where camera rotates to the direction of lens 93, Figure 6).

Art Unit: 2612

Regarding claim 13, Robb discloses the first lens and second lenses are fixed ( lenses 93, 95 are fixed on enclosure 99, Figure 6).

Regarding claim 14, Robb discloses a display (display screen 4, Figures 1A, 3B, Column 5, Lines 48-58).

Regarding claim 15, Robb discloses first aperture faces in the direction of said display (aperture for attaching lens 93 facing in the direction of display screen 4, Figures 1A, 6) and said second aperture faces in the direction opposite said display (aperture for attaching lens 95, Figures 1A, 6).

Regarding claim 16, Robb discloses camera (Multiplephone 20, Figure 1, Column 5, Lines 24-65) comprising a housing (Multiplephone 20 has a housing, which includes clip-on enclosure 99, Figures 1A-1B, 6, Column 5, Lines 24-65, Column 10, Lines 33-58); a display mounted in said housing (display screen 4, Figures 1A, 3B, Column 5, Lines 48-58); a first light aperture formed in a first side of said housing and facing in the direction of said display (aperture for attaching lens 93 which faces in the direction of display screen 4, Figures 1A, 6, Column 10, Lines 49-58); a second light aperture formed in a second side of said housing an facing in a direction opposite said display (aperture for attaching lens 95, Figure 6, Column 10, Lines 49-65); an image sensor disposed within said housing for converting images formed by light on said image sensor into electrical signals (inherently included in camera 2, Figure 6, Column 10, Lines 33-40); an optical system for selectively directing light passing through said first and second

Art Unit: 2612

light apertures onto said image sensor (combination of lens 93, 95, camera 2 inherently included a focusing lens, camera shroud 92, light sources 97, Figure 6, Column 10, Lines 33-58); and an image processor coupled to an output of said image sensor for processing the electrical signals from said image sensor to produce image signals (processor 41, Figure 3, Column 7, Lines 34-39).

Regarding claim 24, Robb discloses said optical system comprises at least one lens (focusing lens inherently included in camera 2, Figure 6).

Regarding claim 25, Robb discloses the lens is movable between a first position along a first image path (camera 2 inherently included a focusing lens rotates to the direction of lens 93, Figure 6, Column 10, Lines 35-40) to a second position along a second image path (camera 2 inherently included a focusing lens rotates to the direction of lens 95, Figure 6, Column 10, Lines 35-40).

Regarding claim 27, Robb discloses a first lens (lens 93) disposed along said first image path (the path where camera rotates to the direction of lens 93, Figure 6) and a second lens (lens 95) disposed along said second path (the path where camera rotates to the direction of lens 93, Figure 6).

Regarding claim 28, Robb discloses the first lens and second lenses are fixed (lenses 93, 95 are fixed on enclosure 99, Figure 6).

Art Unit: 2612

Regarding claim 38, Robb discloses a combination mobile terminal and camera (Multiplephone 20, Figure 1, Column 5, Lines 24-65) comprising a housing (Multiplephone has a housing, which includes clip-on enclosure 99, Figures 1A-1B, 6, Column 5, Lines 24-65, Column 10, Lines 33-58); a wireless transceiver disposed within said housing for transmitting and receiving signals (aerial 1, Figure 1, Column 5, Lines 35-40); an image sensor disposed within said housing for converting images formed by light on said image sensor into electrical signals (inherently included in camera 2, Figure 6, Column 10, Lines 33-40); an optical system for selectively directing light entering the housing from a first and a second direction onto said image sensor (combination of lens 93, 95, camera 2 inherently included a focusing lens, camera shroud 92, light sources 97, Figure 6, Column 10, Lines 33-58; first direction where camera 2 rotates to the lens 93; second direction where camera 2 rotates to lens 95); and an image processor coupled to an output of said image sensor for processing the electrical signals from said image sensor to produce image signals (processor 41, Figure 3, Column 7, Lines 34-39).

Regarding claim 39, Robb discloses wherein the optical system selectively directs light entering the housing through one of two apertures in the housing (light entering the housing through lenses 93, 95, Figure 6) .

Regarding claim 40, Robb discloses wherein the optical system selectively directs light entering the housing through a first aperture located in the front of the housing (aperture for attaching lens 93 facing in direction of display screen 4, Figures 1A, 6) and a second aperture

Art Unit: 2612

located in the rear of the housing (aperture for attaching lens 95 facing in the opposite direction of display screen 4, Figures 1A, 6).

4. Claims 33-34, are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura (U. S. Patent No. 5,940,126).

Regarding claim 33, Kimura discloses a method of directing multiple images through multiple apertures onto an image sensor (directing images through lenses 5R, 5L, Figure 5, Column 5, Lines 33-45) comprising recording a first image by directing the first image through a first aperture (directing image through lens 5R, Figure 5, Column 5, Lines 33-45) onto a mirror assembly (reflecting mirrors 51R, 51L, Figure 5, Column 5, Lines 33-45); reflecting the first image from the mirror assembly (reflecting mirrors 51R, 51L, Figure 5, Column 5, Lines 33-45) and directing the reflected first image onto the image sensor (charge couple device 520, Figure 5, Column 5, Lines 33-45); recording a second image by directing the second image through a second aperture (directing image through lens 5L, Figure 5, Column 5, Lines 33-45) onto the mirror assembly (reflecting mirrors 51R, 51L, Figure 5, Column 5, Lines 33-45); reflecting the second image from the mirror assembly (reflecting mirrors 51R, 51L, Figure 5, Column 5, Lines 33-45) and directing the reflected second image onto the image sensor (charge couple device 520, Figure 5, Column 5, Lines 33-45).

Regarding claim 34, Kimura discloses the mirror assembly includes a single mirror (reflecting mirrors 51R and 51L, Figure 5, Column 5, Lines 33-45), and wherein the first and second images are reflected from the single mirror onto the image sensor (the first and second



Art Unit: 2612

images are reflected from the reflecting mirrors 51R and 51L onto charge couple device 520, Figure 5, Column 5, Lines 33-45).

*Allowable Subject Matter*

5. Claims 29-32 are allowable.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 29, the prior art of the record fails to show or fairly suggest a method for selectively displaying images seen through first and second apertures of a camera facing in opposing directions, said method comprising providing movable mirror assembly for selectively directing light entering through said first and second apertures onto an image sensor to capture an image.

Claims 30-32 are allowable for the reason given in claim 29.

6. Claims 2-8, 11, 17-23, 26, 35-37, 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of the record fails to show or fairly suggest a combination mobile terminal and camera comprising wherein said optical system comprises a mirror assembly having at least one movable mirror, said mirror assembly being movable between a first position to direct light entering through said first light aperture along a first image

Art Unit: 2612

path onto said image sensor and a second position to direct light entering through said second light aperture along a second image path onto said image sensor.

Claims 3-8 are allowable for the reason given in claim 2.

Regarding claim 11, the prior art of the record fails to show or fairly suggest a combination mobile terminal and camera comprising a movable mirror assembly having at least one movable mirror, said mirror assembly being movable between the first position to direct light entering through said first light aperture along said first image path onto said image sensor and the second position to direct light entering through said second light aperture along said second image path onto said image sensor.

Regarding claim 17, the prior art of the record fails to show or fairly suggest a camera comprising wherein said optical system comprises a mirror assembly having at least one movable mirror, said mirror assembly being movable between a first position to direct light entering through said first light aperture along a first image path onto said image sensor and a second position to direct light entering through said second light aperture along a second image path onto said image sensor.

Claims 18-23 are allowable for the reason given in claim 17.

Regarding claim 26, the prior art of the record fails to show or fairly suggest a camera comprising a movable mirror assembly having at least one movable mirror, said movable mirror assembly being movable between the first position to direct light entering through said first light

Art Unit: 2612

aperture along said first image path onto said image sensor and the second position to direct light entering through said second light aperture along said second image path onto said image sensor.

Regarding claim 35, the prior art of the record fails to show or fairly suggest a method of directing multiple images through multiple apertures onto an image sensor comprising wherein the single mirror is movable between first and second positions, and wherein in the first position said single mirror aligns with said first aperture, and wherein in said second position said single mirror aligns with said second aperture.

Claim 36 is allowable for the reason given in claim 35.

Regarding claim 37, the prior art of the record fails to show or fairly suggest a method of directing multiple images through multiple apertures onto an image sensor comprising wherein said mirror assembly includes first and second mirrors movable between first and second positions, and wherein in said first position said first mirror aligns with said first aperture, and wherein in said second position said second mirror aligns with said second aperture.

Regarding claim 41, the prior art of the record fails to show or fairly suggest a combination mobile terminal and camera comprising wherein the optical system for selectively directing light comprises a first and second movable mirrors slidable between a first position and second position to selectively direct light entering the housing onto the image sensor.

Art Unit: 2612

Regarding claim 42, the prior art of the record fails to show or fairly suggest a combination mobile terminal and camera comprising a position detector to detect the position of the movable component, the image processor being responsive to a signal from the position detector to invert the images when the movable component is in one of the two positions.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T NGUYEN whose telephone number is (571) 272 - 7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272 - 7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN  
05/02/2005



**LUONG T. NGUYEN  
PATENT EXAMINER**